Remarks

The Office Action mailed 10 May 2004 has been received and reviewed. Claims 4, 29, and 45 have been amended. No claims have been cancelled. Therefore, the pending claims include claims 1-78. Reconsideration and withdrawal of the rejections are respectfully requested in view of the amendments and remarks provided herein.

Information Disclosure Statement

Applicants submitted an Information Disclosure Statement, 1449 form, and copies of 11 cited documents to the United States Patent and Trademark Office on 27 July 2001 (a copy of the 1449 form is enclosed herewith as Exhibit A) and have yet to receive a returned Examiner initialed copy.

Applicants respectfully request that the Examiner consider the documents as listed on the 1449 form (Exhibit A) and return the Examiner initialed 1449 form with the next official communication.

The 35 U.S.C. §112, Second Paragraph, Rejection

The Examiner rejected claims 4 and 5 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, antecedent basis was found lacking for the term "the phone apparatus" in claim 4. The claim has been amended to provide antecedent basis and as such the rejection is overcome. Further, claim 29 has been amended to provide proper antecedent basis as well. In addition, claim 45 has been amended to add certain punctuation. None of these amendment narrowed the claim as originally filed.

The 35 U.S.C. §103 Rejection

The Examiner rejected claims 1-10, 12, 14-22, 24-55, and 57-78 under 35 U.S.C. §103(a) as being unpatentable over May (U.S. Patent No. 5,446,783) in view of Rybicki et al. (U.S. Patent No. 6,151,149) and Ruppert et al. (U.S. Patent No. 6,236,969 B1) and Pieterse et al. (U.S. Patent No. 5,714,741 A). Applicant respectfully traverses such rejections.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143.

May (U.S. Patent No. 5,446,783) describes a battery pack that is removably mounted on the back of a cellular phone. The battery pack contains an infrared port 51 for transmitting infrared information between the cellular phone and a computer (i.e., capable of sending and/or receiving infrared signals). A device interface 25 and passthru device interface 55 are connected to the infrared convertor 60 which converts electrical information to infrared information for transmission between the cellular phone and the computer via the infrared port 51.

Rybicki et al. (U.S. Patent No. 6,151,149) describes various ways of encoding pulses, such as by pulse positioning modulation, pulse pattern modulation, and/or pulse amplitude modulation.

Ruppert et al. (U.S. Patent No. 6,236,969 B1) describes a telephone headset 10 that "further includes an ear speaker 20 that is engaged within the mouthpiece 16 at the opposite end from the microphone 18. An ear cushion 21 is provided so that the microphone can be supported and seated against the ear of the user. The headband 12 is provided in adjustable sections. The band includes a fixed section 12a that is attached to the electronics housing 14. A strap 12b extends from the fixed section and is adjustably engaged by a movable section 12c. In this respect, the headband 12 can be of a conventional design to permit adjustment to accommodate

the head of the user. The movable section 12c can be provided with a counterweight at its free end to balance the weight of the headset components on the user's head." (Column 4, lines 10-22) As described at column 6, line 57 through column 7, line 21, a base unit 70 that can operate within a telephone system, includes an I/R interface 88 that can transmit an infrared signal to the telephone headset 10. The headset can be provided with a corresponding I/R interface 89, located on the underside of the mouth piece 16. Circuitry within the headphone control electronics component 32 can be used to receive and condition signals transmitted via the I/R interfaces 88 and 89. Various I/R communication configurations are described.

Pieterse et al. (U.S. Patent No. 5,714,741 A) describes "a housing 2, a microphone 3, a loudspeaker 4, a first LED 5, a second LED 6, and a control button 7. In the embodiment shown, the housing 2 is composed of two parts 2a and 2b, which are interconnected by means of a hinge 10. In the housing 2 (part 2a) a slot 8 is recessed for inserting an IC card 11. (Column 4, 38-43) As described in column 2, lines 60-65, a device provides a means for exchanging data between the IC card and a remote terminal via a communication apparatus.

As described below with respect to each of the independent claims, the references cited by the Examiner do not teach or suggest all the claim limitations of such independent claims. Therefore, such claims are not obvious in view of such references.

Further, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings so as to arrive at the claimed invention. As such, the claimed invention is patentable over the cited references for lack of suggestion and motivation as well. However, as the references cited by the Examiner do not teach or suggest all the claim limitations, Applicant only generally traverses such lack of suggestion or motivation.

Further, the Examiner cites four references in one or more of the claim rejections without motivation or suggestion to combine such references. Without providing such motivation or suggestion in the Office Action, Applicant can only respond by indicating that the Examiner is performing improper hindsight reconstruction of the claimed invention.

Claims 1 and 35

Claim 1 recites a portable communication system for use by a user with a communication apparatus having an audio port (e.g., a speaker/microphone jack). The system includes an infrared transmitter apparatus that includes at least one audio port configured to receive an audio signal representative of received audio input from the communication apparatus, at least one infrared light emitting device, modulation circuitry, and a microphone coupled to the at least one audio port of the infrared transmitter apparatus and operable to generate an audio signal from received sound input of the user. The audio signal generated from received sound input of the user (e.g., someone talking hands-free in a car) is provided to the audio port of the communication apparatus via the audio port of the infrared transmitter apparatus. A transmitter housing is provided that encloses the modulation circuitry and the microphone and upon which the at least one infrared light emitting device is mounted, and further that is configured to be removably coupled to the communication apparatus.

Further, the system recited in claim 1 includes an infrared receiver apparatus that includes an infrared light detection device, a speaker, demodulation circuitry operable to convert the one or more electric signals representative of the detected infrared pulses to an audio signal to power the speaker to produce a sound output, and a receiver housing enclosing the speaker and the demodulation circuitry and upon which the infrared light detection device is mounted. The receiver housing is formed to be self-supported by the ear of the user.

Claim 35 includes similar components, but is not limited to infrared components.

The references cited do not teach or suggest all the limitations recited in claims 1 and 35. For example, May does not teach or suggest a microphone coupled to the at least one audio port of the transmitter apparatus and operable to generate an audio signal from received sound input of the user. Further, May does not describe that the audio signal generated from received sound input of the user (e.g., someone talking hands-free in a car) is provided to the audio port of the communication apparatus via the audio port of the transmitter apparatus. Yet further, May does

not teach or suggest a transmitter housing that encloses the modulation circuitry and the microphone. Yet further, May does not teach or suggest a receiver apparatus that includes a detection device, a speaker, demodulation circuitry, and a receiver housing enclosing the speaker and the demodulation circuitry; wherein the receiver housing is formed to be self-supported by the ear of the user.

The Examiner alleges that Ruppert et al. describes "a microphone (Fig. 1#18) coupled to the at least one audio port of the infrared transmitter apparatus and operable to generate an audio signal from received sound input of the user, wherein the audio signal generated from received sound input of the user is provided to the audio port of the communication apparatus via the audio port of the infrared transmitter apparatus." However, Ruppert et al. does not describe a microphone in a transmitter apparatus that has an audio port connected to an audio port of the communication apparatus (e.g., a phone) so the audio signal generated from received sound input of the user is provided to the audio port of the communication apparatus via the audio port of the transmitter apparatus. Rather, Ruppert et al. teaches a microphone that is part of the receiver/transmitter headset and not a transmitter apparatus that is removably coupled to the communication apparatus (e.g., phone). As such, there is no communication from the microphone to the audio port of the transmitter apparatus to the audio port of the communication apparatus to which it is coupled. The most that Ruppert et al. teaches is the use of a microphone in a receiver/transmitter headset and/or a microphone in a base station. Ruppert et al. does not teach or suggest the use of a microphone in a transmitter apparatus as described according to the present invention.

Further, the Examiner alleges that Ruppert et al. discloses "a receiver housing enclosing the speaker and the demodulation circuitry and upon which the infrared light detection device is mounted, wherein the receiver housing is formed to be self-supported by the ear of the user." However, Ruppert et al. does not teach or suggest a receiver housing that is formed to be self-supported by the ear of the user. Rather, Ruppert et al. describes a telephone headset 10 that includes an ear speaker 20 that is engaged within the mouthpiece 16 at the opposite end from the

microphone 18. An ear cushion 21 is provided so that the microphone can be supported and seated ***against*** the ear of the user, not self-supported by the ear of the user. The headband 12 is provided to be adjustable for supporting the headset and permit adjustment to accommodate the head of the user as the headset 10 is supported thereby.

Further, the Examiner alleges that Pieterse et al. discloses "a removably coupled transmitter (2a of Figure 3) onto the communication apparatus." However, Pieterse et al. does not teach or suggest such a removably coupled transmitter. Pieterse et al. only discloses a device that provides a means for exchanging data between the IC card and a remote terminal via a communication apparatus. It is unclear which portions of the Figure 3 that the Examiner asserts is removably coupling a transmitter to the communication apparatus. This element is not shown by Pieterse et al. If the Examiner can, with more specificity, show otherwise, Applicants will provide a response to such a more detailed rejection.

Rybicki et al., nor the other references cited, do anything to cure the lack of teaching or suggestion of the missing elements.

For at least the above reasons, claims 1 and 35 are not obvious in view of the cited references. Further, as claims 2-16 and 36-44 depend on respective independent claims 1 and 35, either directly or indirectly, they include the limitations thereof. As such, these claims are also not obvious over the cited references for the same reasons as provided above and by reason of their own limitations.

Claims 17, 29, and 51

Claim 17 recites a transmitter apparatus for use by a user with a communication apparatus (e.g., a phone) having an audio port. The apparatus includes at least one audio port configured to receive an audio signal representative of received audio input from the communication apparatus, modulation circuitry, and a microphone coupled to the at least one audio port of the transmitter apparatus and operable to generate an audio signal from received sound input of the user. The audio signal generated from received sound input of the user is provided to the audio port of the communication apparatus via the audio port of the transmitter

apparatus. Further, the apparatus includes a transmitter housing enclosing the modulation circuitry and the microphone. The transmitter housing is of a size smaller than the communication apparatus and configured to be removably coupled onto the communication apparatus.

Claims 29 and 51 include similar components. Certain of the claims include infrared limitations, while others do not.

The references cited do not teach or suggest all the limitations recited in claims 17, 29, and 51. For example, May does not teach or suggest a microphone coupled to the at least one audio port of the transmitter apparatus and operable to generate an audio signal from received sound input of the user. Further, May does not describe that the audio signal generated from received sound input of the user (e.g., someone talking hands-free in a car) is provided to the audio port of the communication apparatus via the audio port of the transmitter apparatus. Yet further, May does not teach or suggest a transmitter housing that encloses the modulation circuitry and the microphone.

The Examiner alleges that Ruppert et al. describes "a microphone (Fig. 1#18) coupled to the at least one audio port of the infrared transmitter apparatus and operable to generate an audio signal from received sound input of the user, wherein the audio signal generated from received sound input of the user is provided to the audio port of the communication apparatus via the audio port of the infrared transmitter apparatus." However, Ruppert et al. does not describe a microphone in a transmitter apparatus that has an audio port connected to an audio port of the communication apparatus (e.g., a phone) so the audio signal generated from received sound input of the user is provided to the audio port of the communication apparatus via the audio port of the transmitter apparatus. Rather, Ruppert et al. teaches a microphone that is part of the receiver/transmitter headset and not a transmitter apparatus that is removably coupled to the communication apparatus (e.g., phone). As such, there is no communication from the microphone to the audio port of the transmitter apparatus to the audio port of the communication apparatus to which it is removably coupled. The most that Ruppert et al. teaches is the use of a

microphone in a receiver/transmitter headset and/or a microphone in a base station. Ruppert et al. does not teach or suggest the use of a microphone in a transmitter apparatus as described according to the present invention.

Further, the Examiner alleges that Pieterse et al. discloses "a removably coupled transmitter (2a of Figure 3) onto the communication apparatus." However, Pieterse et al. does not teach or suggest such a removably coupled transmitter. Pieterse et al. only discloses a device that provides a means for exchanging data between the IC card and a remote terminal via a communication apparatus. It is unclear which portions of the Figure 3 that the Examiner asserts is removably coupling a transmitter to the communication apparatus. This element is not shown by Pieterse et al. If the Examiner can, with more specificity, show otherwise, Applicants will provide a response to such a more detailed rejection.

Rybicki et al., nor the other references cited, do anything to cure the lack of teaching or suggestion of the missing elements.

For at least the above reasons, claims 17, 29, and 51 are not obvious in view of the cited references. Further, as claims 18-28, 30-34, and 52-60 depend on respective independent claims 17, 29, and 51, either directly or indirectly, they include the limitations thereof. As such, these claims are also not obvious over the cited references for the same reasons as provided above and by reason of their own limitations.

Claim 45, 61, 69, and 75

Claim 45 recites a receiver apparatus that includes a detection device, a speaker, demodulation circuitry, and a receiver housing enclosing the speaker and the demodulation circuitry. The receiver housing is formed to be self-supported by the ear of the user.

Claim 61 includes similar components, and claims 69 and 75 include a receiver housing that is self-supported by the ear, and in particular, ear retaining structure that is configured for insertion into the concha of the ear.

The references cited do not teach or suggest all the limitations recited in claims 45, 61, 69, and 75. For example, May does not teach or suggest a receiver apparatus that includes a detection device, a speaker, demodulation circuitry, and a receiver housing enclosing the speaker and the demodulation circuitry; wherein the receiver housing is formed to be self-supported by the ear of the user. Further, clearly, May does not teach such an ear self-supported retaining structure that is configured for insertion into the concha of the ear.

The Examiner alleges that Ruppert et al. discloses "a receiver housing enclosing the speaker and the demodulation circuitry and upon which the infrared light detection device is mounted, wherein the receiver housing is formed to be self-supported by the ear of the user." However, Ruppert et al. does not teach or suggest a receiver housing that is formed to be self-supported by the ear of the user. Rather, Ruppert et al. describes a telephone headset 10 that includes an ear speaker 20 that is engaged within the mouthpiece 16 at the opposite end from the microphone 18. An ear cushion 21 is provided so that the microphone can be supported and seated ***against*** the ear of the user, not self-supported by the ear of the user. The headband 12 is provided to be adjustable for supporting the headset and permit adjustment to accommodate the head of the user as the headset 10 is supported thereby.

Further, with respect to claim 45, none of the references describe a transmitter apparatus that includes at least one audio port configured to receive an audio signal representative of received audio input from the communication apparatus via a wired connection with the audio port of the communication apparatus.

Neither Pieterse et al. nor Rybicki et al., nor the other references cited, do anything to cure the lack of teaching or suggestion of the missing elements.

For at least the above reasons, claims 45, 61, 69, and 75 are not obvious in view of the cited references. Further, as claims 46-50, 62-68, 70-74, and 76-78 depend on respective independent claims 45, 61, 69, and 75, either directly or indirectly, they include the limitations thereof. As such, these claims are also not obvious over the cited references for the same reasons as provided above and by reason of their own limitations.

Claims 11, 13, 23, and 56

The Examiner further rejected claims 11, 13, 23, and 56 under 35 U.S.C. §103(a) as being unpatentable over May (U.S. Patent No. 5,446,783), Rybicki et al. (U.S. Patent No. 6,151,149), Ruppert et al. (U.S. Patent No. 6,236,969 B1), and Pieterse et al. (U.S. Patent No. 5,714,741 A) as applied to claim 1, 17, and 51, and further in view of Noetzel (U.S. Patent No. 4,980,926 A).

As claims 11 and 13, 23, and 56 depend on respective independent claims 1, 17, and 51, either directly or indirectly, they include the limitations thereof. As such, these claims are also not obvious over the cited references for the same reasons as provided above and by reason of their own limitations.

Summary

It is respectfully submitted that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
Marlyn J. ANDERSON et al.,

By
Mueting, Raasch & Gebhardt, P.A.
P.O. Box 581415
Minneapolis, MN 55458-1415
Phone: (612) 305-1220
Facsimile: (612) 305-1228
Customer Number 26813

9 NOV 2004
Date

By: _____
Mark J. Gebhardt
Reg. No. 35,518
Direct Dial (612) 305-1216

CERTIFICATE UNDER 37 CFR §1.8:
The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop **Amendment**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 9th day of NOVEMBER, 2004, at 12:00pm (Central Time).

By: _____
Printed Name: Kelly J. McNulty